Culling and Care: Ferals, Invasives and Conservation Icons in Australia

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ABSTRACT

The question of problem animals in Australia is often framed in language that has nothing to do with either science or conservation management, but is rather about nationalism and popular culture. The need to attract funding for conservation can often lead to framing problems as 'national', yet caring for nature can be done on many scales, and ecological systems is seldom work on national scales. This paper considers both ecological scales (regulated by the animal or plant under consideration) and personal scales (scales meaningful to the conservation manager). The idea that only certain sorts of conservationists can 'care' can itself become the problem where conservation groups care, but care *differently*, and spend time and effort fighting each other, rather than improving ecological outcomes for the animals and plants they care about. Examples discussed include kangaroos in Canberra and cane toads in northern Australia. Changing some inflammatory language and finding more productive uses for the animals culled may enable more inclusive conservation efforts, and engage more hands to help. Macho and military eradication efforts may get in the way of caring for the country, or the animals displaced by invaders. Wasteful practices give conservation a bad name. Better 'metaphors for environmental sustainability' (Larson, 2011) can lead to better outcomes for the environment and for those who care for it. The task of conservation demands more than science: it is rewarding for many of the people who undertake it. Conservation is an opportunity for service that many volunteers welcome.

Key words: Feral animals, weeds, pests, metaphors for environmental sustainability, community conservation, animal ethics, invasion biology, environmental management.

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Framing the 'problem' of feral animals

'All that protein, shot and left to waste while so much of the world is hungry!'. So exclaimed my South African friend as she observed Australians culling tens of thousands of camels, horses, donkeys and other invasive animals to preserve desert vegetation. Unlike in South Africa, culling has not been part of debates about 'food security' in Australia. The rhetorical ploy of 'feeding the world' has justified many agricultural schemes historically (Muir 2014, 104), encouraging government support for the national interest by reference to the international. Doctor and journalist Edward Gault argued in 1943 that Australia should have as 'a permanent measure'… 'to feed the world as a whole' (Muir 2010, n. 5). Every state has also aspired to this, particularly at times of crisis, during wars and in periods of post-war reconstruction (Bolton 1992: 69-70). Developing northern Australia to feed the world, a recurrent aspiration of nationalist politicians since the 19th century, continues to be a rationalization in the 21st (Robin 2007). However, much of the culling of invasive populations of animals in the north and centre has been justified in terms of preserving native vegetation and animals. Agriculture's nationalism is rather distant from the new nationalism of conservation. At times there is tension, even contradiction, between the two.

Conservation experts and agricultural experts speak to different audiences, and use different metaphors when they speak of environmental sustainability (Larson 2011). Language choices can show up inconsistencies of practice. The idea of culling for 'conservation' then wasting the food, hides and other animal elements of a cull is one of the big inconsistencies in the behaviour of Australians who care about nature. It has become a flashpoint between 'caring' people – especially between those caring for environmental outcomes and those who advocate more careful and ethical treatment of animals.

Waste not, want not

In a forum where Zoology is 'on the table', it is good to reconsider feeding, if not the world, at least ourselves, as we manage environments plagued by population irruptions. Might it be better to 'slaughter' feral animals – that is kill them in a way that allows the possibility of using them for food, rather than simply 'culling' (and discarding) them as nuisance animals? This would demand a change of scale, and a change of ethics of care. The idea would be to solve landscape stress, without stressing individual animals. A careful death, where every animal is treated as an individual (van Dooren 2011), demands a very different scale from aerial culling of invasive populations in bulk, where individuals are left wounded to die slowly. Yet some of the additional costs could be recouped by re-using the bodies of the animals themselves.

A mobile multi-species abattoir is an expensive piece of equipment, so eating feral animals is not a proposal that should be taken lightly. Aerial and broad-scale culling of invasive animals is usually seasonal and far from markets, so an abattoir or slaughterhouse must move to the cull, not the other way around. It is almost never economic to run this sort of operation all year round – nor to specialize in the slaughter of a single type of animal. This is a very different abattoir from one designed for cows, sheep or other animals that can be driven alive to a purpose-built slaughterhouse. The idea of a mobile abattoir for kangaroos is however not without precedent (figure 1). *Wild Life Service*, the journal instigated by Allen Strom when he was appointed Chief Guardian of Flora and Fauna in NSW, published an image of a meat freezer for rabbits (labelled N.C. Treloar, Adelaide), repurposed to freeze kangaroo carcasses from a culling exercise. The Wild Life Service used freezers which became available when myxomatosis had rendered rabbits unsuitable for consumption or fur (Kitson unpublished).

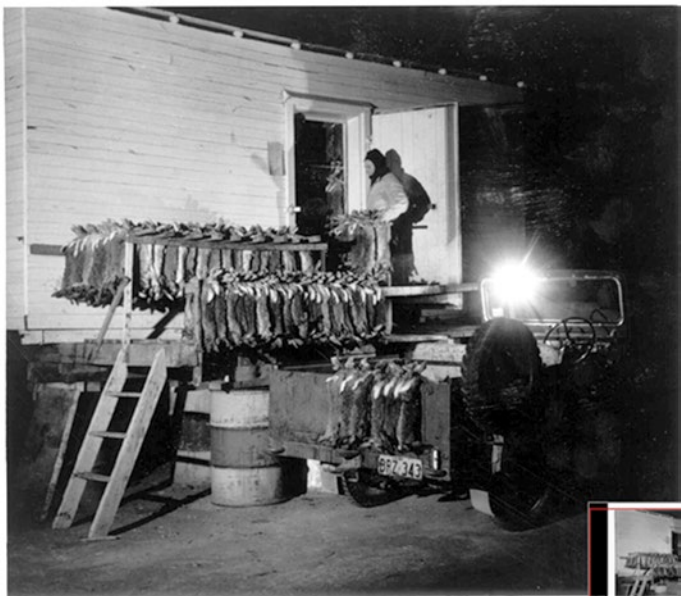

Figure 1. Professional rabbit shooters load rabbits into mobile freezer, in South Australia west of the Wild Dog Fence in the mid 1950s. Jack McCraith, rabbit dealer of Melbourne bought most of the product, supplying the mobile freezers to support his local and export meat market and also pelts used to make the famous Akubra hats. (Photo and caption: Jeff Carter) NLA Archives and online: http://nla.gov.au/nla.obj-147215243/view.

Zoology on the Table

This paper draws together historical and practical examples of conservation with an extended discussion of the sorts of language that conservation practices invoke. At the *Zoology on the Table* forum, I began with an image when thinking about the uses of metaphor. The composite image (figure 2) comprised an image of kangaroos from the controversial cull in Canberra in 2015 (see Michelle Young 2015) along with an oversized (negotiating/eating) table. Although conservation practice draws heavily on excellent science, it also depends on community goodwill, and often public funds to achieve its aims. The language of science is often not the only one that is invoked in creating policies for conservation and in persuading politicians to fund programs. David Theodoropoulos (2003) has argued, in fact, that the language of conservation science might be so 'overstated' as to render it merely 'pseudoscience'.

I am a historian, not a scientist, and I do not begin with the assumption that science is the only way to do conservation. I am less worried about 'overstatement' than about using a language that may exclude some of the parties that want to care for the environment and its animals. Terms like *invasion biology* (Richardson 2011) and *crisis science* (Soulé 1985) undermine science: they emphasise the *application* over the method, and carry the implication that the end might justify the means. Theodoropoulos is worried about the science that emerges from what Soulé (1985: 728) calls the triage approach to conservation. I am more concerned about the *culture* it engages with. Conservation is something that is done

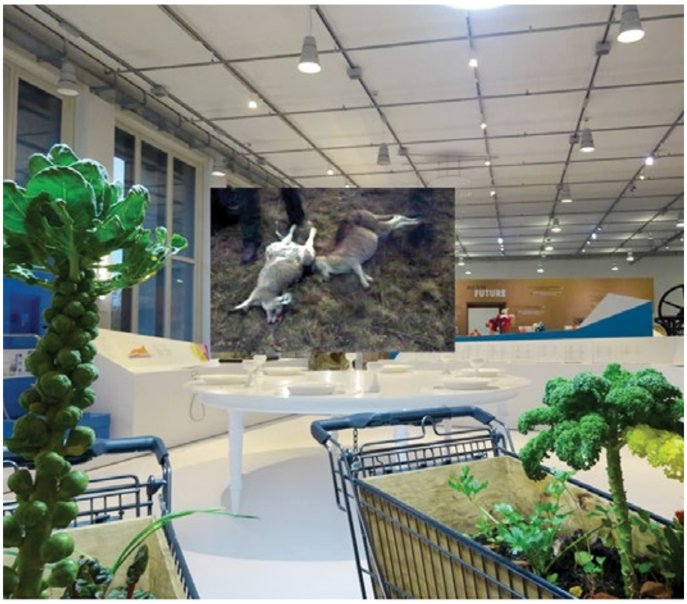

Figure 2. Unwanted kangaroos discarded near Canberra (inset, ABC News), Food Module, *Welcome to the Anthropocene*, Deutsches Museum, Munich 2014 (Photo: Libby Robin)

to the environment by people, but it undoubtedly also changes the people who do it, the culture it supports and even the 'national interest'. Questions of what is in the national interest are hardly scientific, in themselves, but in Australia, we have a long history of using science to inform policy (Robin 2007). So it is important to frame conservation initiatives in a language that enables inclusive rather than exclusive conservation partnerships.

The table in the image is oversize. It was designed 'big' to discuss big ideas, and to be the central 'think piece' in the Food module in *Welcome to the Anthropocene*, a major exhibition running from 2014-2016 at the Deutsches Museum, Munich (Möllers *et al.*. 2015). The Anthropocene is a proposed geological epoch, but it has also become a cultural metaphor – whether the geologists ultimately approve it or not (Hamilton 2016). The (cultural) Anthropocene forces us to consider the deep past and the deep future together; it is all about how global processes play out in local places, so it needs science and arts working together (Schwägerl 2014). One of the big questions of the Anthropocene is 'biosphere integrity' – a term that includes both functional and genetic diversity, and transcends the earlier notion of 'biodiversity loss' (Steffen *et al.* 2015). In the Great Acceleration of physical and social changes that operate on an increasingly global scale, loss of 'biosphere integrity' is accelerating very fast and increasingly affecting most of the other changes that create a 'safe operating space' for humanity (McNeill and Engelke, 2016; Rockström *et al.* 2009).

In a multidisciplinary forum like this one, we need a similarly big table to consider how lateral approaches to conservation and managing invasive species might even help furnish some food for the new tables of the Anthropocene. Employing a wider range of metaphors will at least enable people who care about animals and environments in different ways to all 'sit at the table' of conservation discussions.

Feral animals: imperatives and pejoratives

Anna Wilson, David Wilson and I in an earlier paper (Wilson *et al.* 2016) explore whether labelling species or a population or a group *feral* advances the theoretical and practical aims suggested by scientists, humanists and managers. It's a very common word in Australia, and has become increasingly widely used in a pejorative way in recent times. Even the uncontrollable upper house of parliament was dubbed a *feral senate* in 2015 by former prime minister, Tony Abbott (Coorey 2015). While feral was a pejorative in 2015, it has not always carried a negative sting. When Darwin used 'feral' in *The Origin of Species* (Darwin 1859), it simply meant 'de-domesticated' or 'formerly domesticated and now wild'. It is, however, a 'loaded' term in the twenty-first century. Theodoropoulos argues that the 'hysteria' about invasive species is compromising the scientific status of conservation biology: invasive species do not always compromise biosphere integrity. But they do stir up fear and 'psychological forces'. Theodoropoulos rightly observes that fear of invasion is human, and has little to do with science (Theodoropoulos 2003, xi). Even the descriptor 'invasion' with biology is loaded, and this form of conservation biology has been created to suit the particular needs of certain policy-makers, and has found a strong following in Australia, New Zealand and South Africa, where Stellenbosch University hosts a Centre for Invasion Biology led by David Richardson. Richardson has even developed a pre-history for invasion biology, linking it to distinguished British ecologist, Charles Elton, who spoke of the global spread of biological invaders in radio lectures in the 1950s (Richardson 2011; Robin 2013).

In this paper, I use an eclectic mix of methods – history, art and museum culture along with science to engage with the question of how biological invasion has developed its emotive dimensions and projected a negative moral status on certain animals. Why is it that Australia has chosen to focus major conservation campaigns on eradicating feral animals and weeds rather than on improving habitat or caring for the animals and plants the eradication programs set out to save? And what does the language of eradication do for public culture in the conservation arena? Ultimately my question is: can we achieve better conservation outcomes by attending more closely to the behaviour of the people undertaking the task?

The feral pejorative has a long and anxious history in Australia. It began with an insecurity about nature, even a biological cringe, in the 19th century. The convict stain, and the antipodean nature together bred a fear of degeneration, as Tom Griffiths explains:

> *Australian colonists were haunted by the spectre of degeneration. There was an implicit danger in populating a continent that seemed to be one vast museum of relics and fossils... A stimulating environment drove organisms to advance themselves, a less stimulating one paralysed them or held them back…The dangers of the strange, ancient environment could only be overcome by subverting the natural order, making it anew, acclimatising imported species, destroying indigenous nature, sponsoring aggressive biological imperialism. (Griffiths 1996: 12)*

Questions about nature in Australia, and how it supports civilization and its humans, begin with what we eat. Settler Australians historically ate native tucker if they were very poor and there were no alternatives, but the export economy focused on the civilized products that would be recognized in the markets of the British Empire: gold, wool and wheat became export staples (not least because they travelled well). Until recently, only the macadamia nut had made it out of Australia to the rest of the world, and then only with cultivars developed in Hawai'i (Burt and Williams 1988). Despite some early efforts to build variety into the diet, even to celebrate the coat of arms by eating the animals that frame its heraldry (kangaroo and emu) (Robin 2009; Boyce 2011), this remained a minor side-play. Native animals and plants came to be valued much later – as 'wild', as diversity, but seldom as food.

While there is no longer a biological cringe – indeed conservation campaigns about feral animals treat them as threats to native animals – there is still some selectivity about which feral animals are problems. 'Feral' can also be attributed to native animals like kangaroos or possums that are perceived to be out of control. The ongoing debates about which animals 'belong' do not always depend on whether the species originated in the place it is now found. Cultural belonging may include biota that are major economic commodities. In parallel, native animals like kangaroos and possums that interfere with the economy or life in the suburbs, can be regarded as invasive or feral. A type of patriotism that supports the national economy blinds Australians to the animal or plant nature of important market exports. Indeed wheat is *just* a commodity: wheat fields are completely absent from Australian vegetation maps (Head *et al.* 2012). Similarly, when the hooves that damage fragile desert soils and vegetation belong to sheep or cattle, there is rarely concern raised (Muir 2014). Commodities are not part of conservation thinking. It is only when the need for the commodity is over – for example when the camels are no longer needed as desert transport – that the animal becomes a 'problem' and if it is invasive or 'feral', it comes under the purview of 'conservation management'.

Rabbits: icons and exceptions of invasion management

Feral is a very strong word and is strongly context-dependent. Particular animals are surprise omissions from the 21st century 'feral' discourse. Rabbits for instance, have been central to the story of invasions in Australia, but are not so often called 'feral' (Wilson *et al.* 2016). Invasion biologists do not deal so much with rabbits as with other animals, with feral cats (figure 3) being a favoured focus of 'national' endeavour (see for example, Australia. Department of the Environment, 2015)

Eric Rolls' powerful book *They All Ran Wild* (Rolls 1969) captured the idea of rabbits as the 'pin up' story of invasives, of animals from elsewhere that overrun the native. This story has not just been told in Australia, but all over the world, beginning with Charles Elton's BBC lectures *The Invaders* (Elton 1958; Robin 2013: 378-380). Francis Ratcliffe, first Head of the CSIRO's Wild Life Section (1949-1961) complained bitterly that ecological work could never focus on native animals in the country because there was always so much work to do in eradicating rabbits first (Robin 1997). New invasion biologists leave rabbit management to those engaged in agricultural pest management. Rabbits continue to be 'vermin', not feral. Feral is a new word, while vermin (and noxious weeds) date back to the agricultural concerns of the 1950s (Victoria 1958).

One particularly iconic image is the rabbit invasion at Wardang Island (South Australia) where myxoma virus trials by CSIR commenced in 1938 (figure 4) It has come to symbolize invasion management 'in general'. It has been reproduced as illustrative of historical invasion biology, ecological imperialism in history (Crosby 1986) and as justification for successive state-based rabbit control programs within Australia. The same picture currently appears on google images as 'near Adelaide 1961' and 'Western Australia 1959' as it takes on iconic status far away from its origins. The image represents anywhere where rabbits have extensively damaged landscapes in short times. (Rabbits were released at Wardang in 1922, and had completely overrun the island by 1938).

Rabbits are *vermin* and threaten agriculture, yet they also displace bilbies and other small mammals that are the focus of feral cat and fox abatement programs

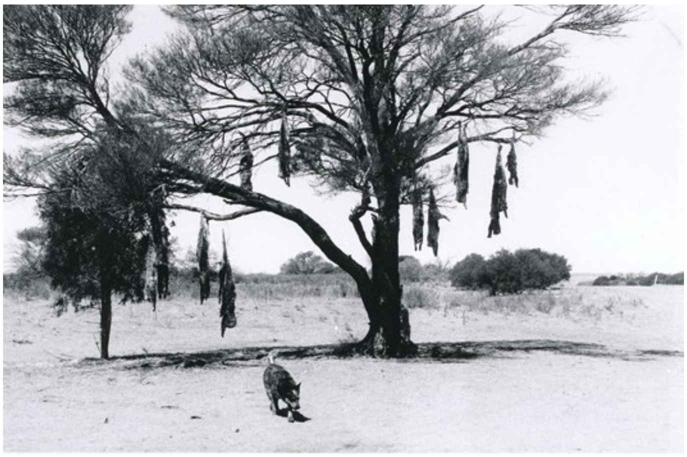

Figure 3. "Cat Tree": William Creek, South Australia 2004 (photo: Darrell Lewis)

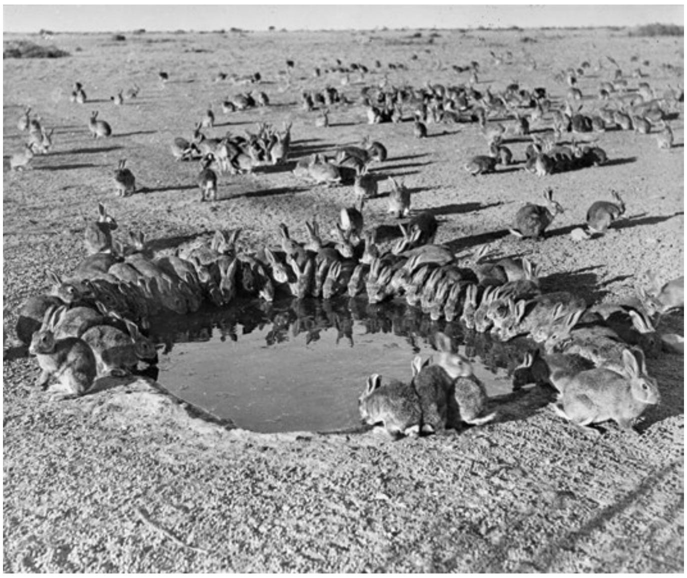

Figure 4. Rabbits as icons of invasion: 1938 Wardang Island (Wikipedia)

(Invasive Species Council 2014; Woinarski 2014). Aboriginal people have long observed that the bilby niche can be filled by rabbits, and in north-eastern South Australia, the rabbit has been incorporated into Wankangurru Dreaming stories and ceremonial headgear, where bilbies are no longer available (M. Smith *et al*. 2004; figure 5) Although rabbits are as much a problem for habitat as pasture, especially in inland Australia, feral camels were recently described as the 'whipper snippers' of the desert vegetation (Wahlquist 2015). Not rabbits, (nor sheep, nor goats nor horses), but camels, because they were the focus of the eradication campaign being publicised.

Feral is a relatively new pejorative and suggests a different sort of 'wild' from that which Eric Rolls wrote about in 1969. Rolls was a farmer-writer, and his farming shaped his fascination with 'wildness': the invaders included cattle, rabbits, foxes and even, as Tom Griffiths has written, "the 'wild men', the 'ungentle' white settlers of Australia. He was impatient with those who disowned such ancestors." (Griffiths 2016, 169). The new ideas about what is feral have arisen at a time when conservation is beginning to displace – or at least challenge – agriculture as a nationalist endeavour. Agriculture and pastoralism were at the heart of civilisation and nationalism for settler Australians in the 1920s (Muir 2014). Returning soldiers were rewarded with land, and crops and domesticated animals (sheep and cows, especially) and through these, they assembled a popular Australian identity. Farmers battled to 'improve' and civilize their small parcels of unsuitable land, and were regarded as heroes for their efforts, however uneconomic they proved to be (Robin 2007). Cultural and nationalist impulses in earlier eras supported almost all of the animals that have subsequently become invasive or 'feral' in the twenty-first century.

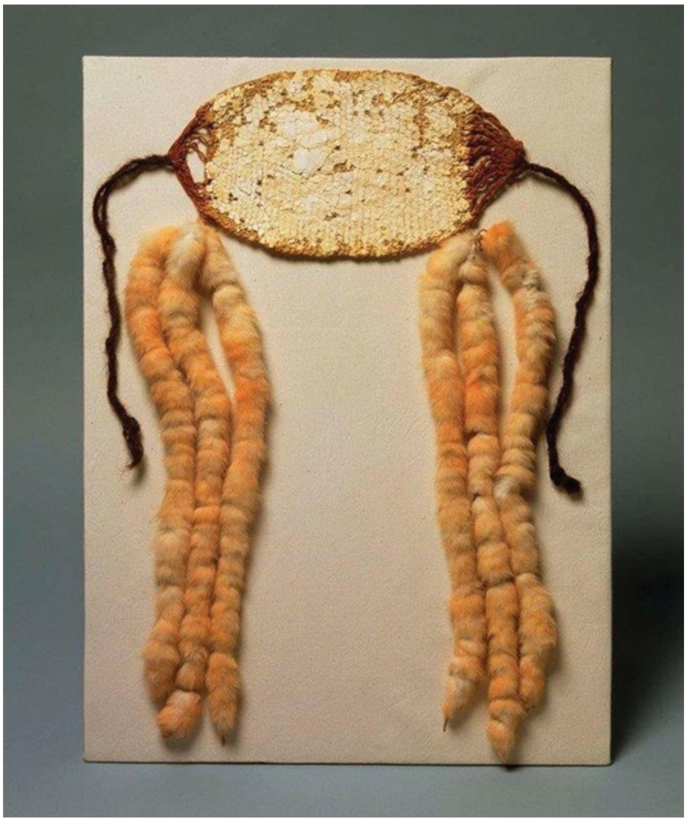

Figure 5. Wangkangurru headdress with rabbit fur (Photo: George Serras: National Museum of Australia)

Rabbits fed poorer people, so they were tolerated. Sometimes they were even encouraged. Even as the rabbit proof fence in Western Australia was stretching a course of over a thousand miles in 1902, some rabbits were deliberately lifted over the fence, to provide a source of food for the communities nearby (M. Smith *et al*. 2004). Rabbits have historically become woven intimately into Australian society in many subtle ways, and this may be why they are not called 'feral'. In 1946 when Alan Holt was commissioned by the School of Agriculture at the University of Melbourne to undertake a sociological survey of wheat-farming in Victoria, he began with the 'rabbitohs': the people who managed rabbits knew all the people on the land, and knew who would be willing to give interviews (Holt, interview with the author 18 November 1991; Holt, 1946). In New South Wales, Rabbitohs were regarded affectionately enough to give their name to a professional rugby league team, South Sydney. The men who fought the battle against rabbits were often the poorest of the rural labouring classes, but the job gave them dignity and honour. The landscape-scale 'ripping', smoking, trapping and poisoning of rabbits made it a crucial part of industrial agriculture (Muir 2014, Fitzgerald 2003). The battlers on the land, and those who battled rabbits, who were often too poor to own land at all, built up dignity not through economic success but through quasi-military 'service'.

Military metaphors and the national interest

Military metaphors and nationalism have found their way across into new forms of land management. Programs to 'eradicate' invasive species have been promoted by invasion biologists and the expertise of the 'crisis science' of conservation biology (Soulé, 1985). Canadian geographer, Brendon Larson, alerts us to the importance of metaphors in developing ideas about sustainability (Larson 2011) and is highly critical of the excessive use of military metaphors in conservation biology in his paper, 'The War of the Roses' (Larson 2005). British geographer, Jamie Lorimer takes this even further in his book, *Wildlife in the Anthropocene* (Lorimer 2015). Lorimer's argument is that wildlife conservation in a world where people and nature can no longer be separated becomes a form of biosecurity management that privileges military-style experts and solutions.

By treating the problem animal or plant as the enemy in a war, we lose the option of caring or having consideration for individual creatures. In fact it is important to suppress empathy in a ruthless war, and efforts to 'eradicate' undoubtedly fall into this category. When we make national heroes out of our conservation battlers – professional and amateur alike, we run the risk of losing interest in the biology of the animal or plant in question. We no longer ask how it belongs to or shapes the ecosystems of which it is a part. Professionals and amateurs approach invasive species differently, but both groups claim to speak on behalf of the 'national interest'.

An Explosion of Weeds

CSIRO, in a nationalist effort in 1958 to stamp out the 'evils of soil erosion' in Central Australia, introduced new pasture grasses to stabilize the topsoil of the inland. After dust storms in the 'dirty thirties' darkened the skies in Sydney and Melbourne, the Alice Springs office of CSIRO developed a project with Buffel grass *Cenchrus ciliaris,* a hardy plant that functioned as both fodder for sheep and cattle and as a binding agent to stop the soil blowing away. In the 21st century, Buffel grass has become widespread, reaching far beyond the pastoral country and replacing the desert vegetation in remote Indigenous lands. If a lightning fire begins in this grass, it burns hot and long, destroying all other vegetation and much of the soil structure below. One fire burned continuously for two and a half years in the millennium drought (2000-2002) (Wright and Clark 2007; Wright pers. comm., July 2004), consuming an area equivalent to a small European country in the west of the Northern Territory. Buffel grass is now regarded as a 'fire weed', and its invasive properties have led to it being identified for an eradication program, undertaken by a group at the same CSIRO office in Alice Springs that introduced it in the first place. The 1930s dust storms were bad, but this long-term invasive plant can be worse for soil erosion over decades, especially with hot fires. Public science has been redirected as the national interest in favour or against buffel grass has changed over time.

Fighting Toxic Toads

The cane toad introduces a very different sort of nationalism. The cane toad *Rhinella marinus* was introduced by Queensland sugar farmers in the 1930s on advice from Puerto Rico where it had allegedly controlled a beetle that threatened crops. Alas it never ate the beetle it was brought in to stop, but itself immediately became widespread and 'invasive'. It is an alien species, not a pretty animal, and its populations 'explode'—and continue to expand, with climate change possibly favouring their future spread (Whitfield 2007). Even its body length is measured negatively: 'snout to vent'. There is nothing to love about cane toads. They are number one on the government's *Feral Animals* control list (Australia n.d.).

Cane toad 'control' is increasingly falling to volunteer groups of *Toad Busters*. The cane toad population has now spread right across the tropical top end, reaching the Kimberley (north-western Australia). Eradication programs are often managed by self-appointed heroes, citizen conservation-soldiers, who aim to kill/eradicate the uncharismatic toad any way they can. The prominent Kimberley Toad Busters seek out the toads at night in their headlights, and then crush them with heavy vehicles. Their website claims that 'community involvement in controlling cane toad population numbers' minimises 'the chance of native predators attacking and consuming a toad, which in turn reduces the number of native animals dying as a direct impact of the cane toad' (Kimberly Toad Busters n.d.). But the evidence that these macho activities diminish the number or size of the toads is patchy. Cane toads are getting bigger and uglier than ever. Their population continues to spread west and inland, now reaching Broome (Parke 2016). The toads spread during the wet when people can't get vehicles into the country. Their patterns of invasion appear to be different from those of other invasive species, making total eradication difficult in seasonally wet country (Urban *et al.* 2008).

Toad busting's greatest success is perhaps as a 'twisted sports idea', accompanied by drinking sprees, as wry singer-songwriter Dana Lyons croons in his music video, filmed in a combat-camouflage singlet and Akubra hat (Lyons 2013). The Cane Toad Muster is an opportunity for 'ornery cowboys' to 'unify the nation /to fight a plague they all fear'. The muster is a 'violent brand new sport' that kills cane toads by driving heavy vehicles over as many as possible: 'Have you got the nerve to swerve?' (Lyons 2013). Toad club activity enables people of very different political views to drink beer together, celebrate dead toads and exaggerate ideas of borders and aliens. It is not good environmental management, not just because cane toads survive and spread anyway, but because it confuses machismo with good outcomes for the natural world. Its only virtue is that it doesn't cost the government and private conservation groups much. In a deeply divided nation, cane toads have become an enemy for very different people to hate together. Cane toads are only a threat, in fact, when they are ingested. They constitute a bizarre case of 'blaming the victim' in defining pests for ecological management.

Who belongs and who does not?

While it is easy for Australians to identify cane toads as invasive, feral and 'alien', terms like *native*, *non-native* and *alien* sometimes work inconsistently, depending on which animals or plants they are applied to. In a philosophical paper, ecologists Matthew Chew and Andrew Hamilton argue cogently that history and cultural expectations, rather than science, determine biotic nativeness. They demonstrate that nativeness is a deeply flawed concept, particularly when it is used as a basis for invasion biology. It is based on historical and legal conventions, rather than biology, yet is justification for much ecological management, including some ecological restoration. They describe what they call the 'hope of belonging' in the overinvestment in the native (Chew and Hamilton 2011: 45). A taxon *belongs* where it occurs (ecologically, and in time and space), and such *belonging* signifies a 'morally superior claim to existence, making human dispersal tantamount to trespassing'. (Chew and Hamilton 2011: 41). *Human* rights of natives have become the rights for native plants, in order to justify a particular form of ecological purity in management.

Border security is not limited to people smugglers. Australian nationalist tropes are riddled with anxiety about belonging (and not) and these have become entangled in the tool kit of environmental management. For example, the Weeds of National Significance program (WONS) funded the eradication of the *nationally* most problematic plants, not plants that are only a problem in the north. One Kimberley weed manager wanted to eliminate locally significant weeds such as Neem *Azadirachta indica*, but the WoNS program grant he won meant that he had to eliminate other plants first. These grew in his area, but were not as invasive as Neem. He ended up eradicating the 'national plants', but also driving his tractor past the Neem and spraying that as well (Head *et al.* 2013: 8—9).

National significance is also a part of the discourse of feral animals, and it is particularly problematic for 'good' animals like horses and pigs, which wreak damage in remote parts of Australia, but are major parts of economies nearer the cities. Once-domesticated animals that have gone wild, have become the focus of many whole landscape conservation programs, not just those that bait carnivorous predators such as feral cats, foxes and dogs. Herbivores such as camels and goats are enemies of the *landscape*, rather than other animals (Thompson 2014). Programs that control feral herbivores operate on a population scale that corresponds to perceived threats to landscape biodiversity and even 'biosphere integrity', rather than merely eliminating individual rogue predators. An overemphasis on the 'feral' animals destroying landscapes feeds a blindness to the damage caused by the agricultural and pastoral economy. Cattle and sheep 'belong' (even though they are non-native). Cane toads do not, nor do camels or horses, and even kangaroos, in some cases as discussed below. When they are *feral*, their right to belong, even to exist, is challenged. The language of invasion biology fosters certain ideological and economic positions, and shapes how animals and plants are viewed (Calver 2004).

An ethic of care

The questions of what we conserve or care about, and how we go about this, has changed rapidly, since the rise of invasion biology as a tool for conservation and the definition of biodiversity and IUCN red lists in the 1980s. Why are invasive species not on the menu? Why are they so often discarded as waste or nuisance material?

The very excess of numbers in invasive populations diminishes the rights of individual animals. Ferals are a 'collective' problem. Management is directed at the level of a population. When rogue animals (for example, sharks, crocodiles, pigs) are singled out for death, it is usually because of a single historical incident, frequently involving a human. This is very different from landscape-scale culls that are driven by a concern for the future of vegetation or small native mammals, where success is only achieved through 'eradication', or local extinction of the problem population. The bulk approach – with aerial culling over vast areas, and even aerial drones proposed for future culls in remote areas in north Australia – distances the hunter from the prey: it is strictly not actually 'hunting' (in the old sense of a hunter stalking individual prey), but rather eliminating populations, often leaving individual animals to die slowly. The vast scales of outback Australia are sometimes too big for details, or for personal relations between hunter and prey. Yet some of the best and most engaging biological documentaries rely on the power of individual animals to carry a story: a great example of this is *Kangaroos: Faces in the Mob*, where the audience meets both the mob, and key individuals – and develops a sense of care and concern for the future of this expanding population with limited territory through following particular faces. Animal Studies scholars and ethicists urge a 'duty of care' to individual animals, recognizing the power of individual animals to command a 'relationship' with observers.

If problem animals are *slaughtered* for food, rather than just culled for conservation, the teams become hunters rather than eradicators, and they are obliged to observe the relations between animals and their ecosystems more closely. Such choices are important for the people who do the management work: already, this is apparent in Aboriginal Ranger Programs in Indigenous Protected Areas (IPA), where 'caring for country' is about building relations, not merely eradicating species, and where culled animals are often eaten. Even non-preferred animals, such as horses, can become food. Kim Mahood reports one IPA manager in 2006 who encouraged eating the carcases of problem horses among the local people who were concerned about the damage they were causing. He butchered and hung the quarters of a horse in his sitting room 'there being nowhere else safe from dogs and other predators…People eat the meat – no Walmajarri is going to turn down a free feed but they aren't much taken by the flavour, which lacks the lubricant of fat' (Mahood 2016: 203). Aboriginal run programs to manage feral animals are an important part of IPA planning and tying culling to hunting and eating can have cultural rewards as well as conservation outcomes (figure 6).

Eating the animals – where possible (not cane toads!) -- is important for everyone. Reusing bodies demands and creates respect. Sometimes new-style businesses even profit from this. *Petite Mort Furs* is a Boston-based couture firm that sells 'accidental fur' by harvesting furs from the 1 million wild animals dying on US roads each day. Their tag line is 'Good taste is never at the expense of an other' (http://petitemortfur.com/). Even cane toads can serve designer products. Their hides are regularly used to make cane toad coin purses for tourists. The Noffs Foundation's Street University program has gone one further and created an expensive fashion shoe, the Gideon shoe, in cane toad hide (with a market tag around $400) (figure 7). Especially, the supporters of conservation programs,

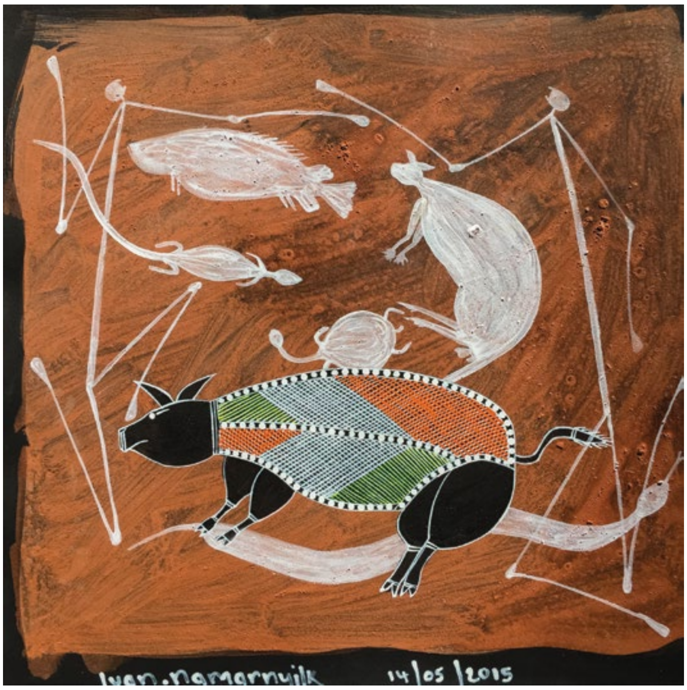

Figure 6. Feral Pig, Djelk IPA, Arnhem Land (Artist: Ivan Namarnyilk) Part of the 2015-16 *Arnhembrand* project: http://www.mandy-martin.com/arnhembrand/

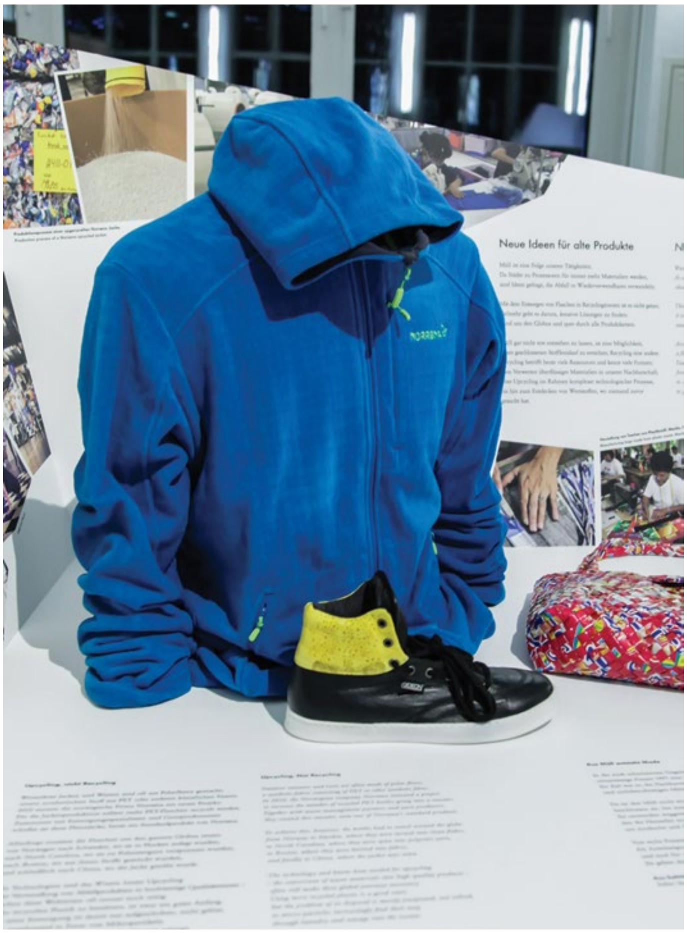

Figure 7. Gideon shoe made out of Cane Toad hide, in *Welcome to the Anthropocene* exhibition, Deutches Museum, Munich, 4 December 2014 (Photo: Josh Wodak) Gideon shoes and the Noffs Foundation project: http://www.gideon.com.au/our-story/an-introduction

animal rights activists and others polarized by questions of culling animals for conservation, need to feel included. Even if the protesters don't choose to eat meat or buy designer furs or shoes, they can recognize its value as protein or leather and other by-products.

Kangaroos in Canberra

One of the chief reasons for culling kangaroos in Canberra is the high number of accidents involving kangaroos and passing vehicles. The dead bodies beside the road become a secondary hazard. A colleague who lives on a farm near Canberra is quick to spot fresh carcasses, and quickly takes them home and butchers them for his working dogs. This is a practical way to value the meat and remove the hazard at the same time.

The cull of Canberra's kangaroos went ahead in 2015 without the legal injunction from the Animal Rights groups, who could not afford another $20,000 legal battle like the ones that they had waged and lost in 2013 and 2014. The cull was less controversial without the legal challenge, but still a talk-radio discussion point, and the subject of several features in the *Canberra Times.* Whatever the success rates, the annual cull gives conservation managers an ambiguous status. Even when the killings are pinpoint accurate and animals are not left suffering, as they are after the aerial culls in the outback and the far north, there are still questions and people expressing concern that individual animals may die in pain.

Meanwhile back in Canberra, we buy kangaroo meat supplied from South Australia to our local supermarket. This is just crazy: the supermarket deals are a problem right through our industrial agriculture complex, and one of the ways that we are getting further from our food sources. As writer Barbara Kingsolver advocated, careful food-gathering is important to health and to the planet. If you can't grow or hunt it yourself, you can at least source it locally (Kingsolver 2007).

Perhaps we could introduce a mobile abattoir to attend the annual Canberra cull that could cryovac meat for a year for our own city? It is not that this will solve all the bigger global feeding the world problems of the Anthropocene, but just that conservation should not be in the business of waste. Conservation needs widespread support for its activities. It should resist deliberately alienating people who care passionately, and have a right to care too. A 'my-sort-of-care' is better than yours argument is not helpful in this time of uncertainty and rapid change. The idea of careful deaths, of acknowledged extinctions is something that Thom van Dooren has written poignantly about with respect to the Little Penguins in Sydney harbour (van Dooren 2011). Living in a land full of animals dubbed ferals, invasives, and conservation icons; sometimes, like the dingo, all three at once (B. Smith 2015), we need new ways to be civilized about relating to animals.

Living in Novel Ecosystems?

In an eerie echo of the earlier pride in 'battling the land' to wrest its agricultural and pastoral produce, feral control programs abound with military metaphors: biosecurity, threats and invasions. Ferality is a category constructed in contradistinction to domesticity/domestication. Feral animal control exposes different understandings of 'nature' and what belongs or does not in a landscape, because typically, feral animals were *once domesticated*, and are now out of control, and in need of 'management'. Feral animals only appear as minor players in the new literature of animal studies (Wilson *et al.* 2016), yet our relations with them are peculiarly revealing of our cultural prejudices. What belongs and does not belong in the wild is contested, and filtered by these prejudices, and about how we value the wild itself.

Patriotic ecologists like Tim Low urge that Australia should resist the globalisation of ecological systems in a continent with high biodiversity values, for fear of creating a new era 'the *Homogocene*' in the future where all animals and plants are the same everywhere, because we have not paid enough attention to saving processes as well as individual animals (Low 1999: xv-xviii; 237—244; Low 2002). Invasion biology that 'combats' feral animals, controlling the undomesticated for the sake of both the wild country and the productivity of agricultural endeavours, carries complex cultural and corporate baggage. Controlling nature goes hand-in-hand with nation-building in Australia. Let's at least not render invasive species inedible by framing them as military enemies.

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